

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/809,312
Source: IFwo
Date Processed by STIC: 1/21/05

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05): U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 10/809,312

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleic
Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino
Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
"bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
(OLD RULES) Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences
(NEW RULES) Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence.
<210> sequence id number
<400> sequence id number
000
- 9 Use of n's or Xaa's
(NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 Invalid <213>
Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 Use of <220>
→ Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses.
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
"bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 Misuse of n/Xaa "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid



IFWO

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/809,312

DATE: 01/21/2005

TIME: 12:37:59

Input Set : A:\5199-69.ST25.txt

Output Set: N:\CRF4\01212005\J809312.raw

3 <110> APPLICANT: Columbia University
 4 Greene, Lloyd A.
 5 Angelastro, James M.
 7 <120> TITLE OF INVENTION: Methods for Regulating Differentiation of Neural Cells and

Uses

8 Thereof
 10 <130> FILE REFERENCE: 5199-69
 C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/809,312
 C--> 14 <141> CURRENT FILING DATE: 2002-03-24
 16 <150> PRIOR APPLICATION NUMBER: 60/460,242
 18 <151> PRIOR FILING DATE: 2003-04-04
 20 <160> NUMBER OF SEQ ID NOS: 20
 22 <170> SOFTWARE: PatentIn version 3.2
 24 <210> SEQ ID NO: 1
 26 <211> LENGTH: 1034
 28 <212> TYPE: DNA
 30 <213> ORGANISM: Human
 32 <400> SEQUENCE: 1
 34 gcacctgtgc ctcagccatg tcactcctgg cgaccctggg actggagctg gacagggccc 60
 36 tgctcccagc tagcgggctg ggctggctcg tagactatgg gaaactcccc ctggccctg 120
 38 cccccctggg cccctatgag gtccctgggg gtgccttggga gggcgggctt ccaggggggg 180
 40 gagagccctt ggcaggtgac ggcttctctg attggatgac cgagcgggtg gacttcacag 240
 42 ccctccttcc tctggaggcc cctctgcccc caggcactct ccccccaccc tccctgccc 300
 44 cccctgaccc tgaagccatg gcatccctac tcaagaagga gctagaacacg atggaagact 360
 46 tcttccttga tgccccactc ctcccacccgc cctcccccacc tccaccccca ccccccagcac 420
 48 cctctctgcc cctgccctta cccttgccca cctttgatct cccgcagcct cctaccctgg 480
 50 atacccttggc cttgttagct gttactgcc gcagtgggc tggggccagg gattcaggct 540
 52 tgacaaccct gcctgtcccc cagcagcctc ctcccttggc ccctctgct tcaccctccc 600
 54 gaccagcccc ctatcctagt cctgccagca cccgagggga ccgcaagcaa aagaagagag 660
 56 accagaataa gtcagctgct ctcaggtacc gccagaggaa gcggggcagag ggcgaggccc 720
 58 tggagggcga gtgccaaggg cttagggcgc ggaatcggga gctgagggag agggcagagt 780
 60 cagtggAACG ggagatccag tatgtgaagg atctgtaat tgaggtgtat aggcacgaa 840
 62 gccagaggac cccgcaagtgc tagggtagcag gaggaggcag ttctgggtga cctgtgcctc 900
 64 cagcttcacc ctgtccctcc attcacttc cctgtgcata cgtgtctagg tctccctct 960
 66 gcctatcccc attatgggtt atttggcata gtcagttct gtaccccttc agtgcactg 1020
 68 agaaccaagc tcga 1034
 71 <210> SEQ ID NO: 2
 73 <211> LENGTH: 281
 75 <212> TYPE: PRT
 77 <213> ORGANISM: Human
 79 <400> SEQUENCE: 2
 81 Met Ser Leu Leu Ala Thr Leu Gly Leu Glu Leu Asp Arg Ala Leu Leu
 82 1 5 10 15
 85 Pro Ala Ser Gly Leu Gly Trp Leu Val Asp Tyr Gly Lys Leu Pro Leu

PS
Does Not Comply
Corrected Diskette Needed

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/809,312

DATE: 01/21/2005
TIME: 12:37:59

Input Set : A:\5199-69.ST25.txt
Output Set: N:\CRF4\01212005\J809312.raw

86	20	25	30		
89	Ala Pro Ala Pro Leu Gly Pro Tyr Glu Val Leu Gly Gly Ala Leu Glu				
90	35	40	45		
93	Gly Gly Leu Pro Gly Gly Gly Glu Pro Leu Ala Gly Asp Gly Phe Ser				
94	50	55	60		
97	Asp Trp Met Thr Glu Arg Val Asp Phe Thr Ala Leu Leu Pro Leu Glu				
98	65	70	75	80	
101	Ala Pro Leu Pro Pro Gly Thr Leu Pro Pro Pro Ser Pro Ala Pro Pro				
102	102	85	90	95	
105	Asp Leu Glu Ala Met Ala Ser Leu Leu Lys Lys Glu Leu Glu Gln Met				
106	106	100	105	110	
109	Glu Asp Phe Phe Leu Asp Ala Pro Leu Leu Pro Pro Pro Ser Pro Pro				
110	110	115	120	125	
113	Pro Pro Pro Pro Ala Pro Ser Leu Pro Leu Pro Leu Pro Leu Pro				
114	114	130	135	140	
117	Thr Phe Asp Leu Pro Gln Pro Pro Thr Leu Asp Thr Leu Asp Leu Leu				
118	118	145	150	155	160
121	Ala Val Tyr Cys Arg Ser Glu Ala Gly Pro Gly Asp Ser Gly Leu Thr				
122	122	165	170	175	
125	Thr Leu Pro Val Pro Gln Gln Pro Pro Pro Leu Ala Pro Leu Pro Ser				
126	126	180	185	190	
129	Pro Ser Arg Pro Ala Pro Tyr Pro Ser Pro Ala Ser Thr Arg Gly Asp				
130	130	195	200	205	
133	Arg Lys Gln Lys Lys Arg Asp Gln Asn Lys Ser Ala Ala Leu Arg Tyr				
134	134	210	215	220	
137	Arg Gln Arg Lys Arg Ala Glu Gly Glu Ala Leu Glu Gly Glu Cys Gln				
138	138	225	230	235	240
141	Gly Leu Glu Ala Arg Asn Arg Glu Leu Arg Glu Arg Ala Glu Ser Val				
142	142	245	250	255	
145	Glu Arg Glu Ile Gln Tyr Val Lys Asp Leu Leu Ile Glu Val Tyr Lys				
146	146	260	265	270	
149	Ala Arg Ser Gln Arg Thr Arg Ser Ala				
150	150	275	280		
153	<210> SEQ ID NO: 3				
155	<211> LENGTH: 15				
157	<212> TYPE: DNA				
159	<213> ORGANISM: rat				
161	<400> SEQUENCE: 3				
163	catgagaacc tagtc		15		
166	<210> SEQ ID NO: 4				
168	<211> LENGTH: 19				
170	<212> TYPE: DNA				
172	<213> ORGANISM: artificial sequence				
174	<220> FEATURE:				
176	<223> OTHER INFORMATION: primer				
178	<400> SEQUENCE: 4				
180	cttggtttct cagttgcac		19		
183	<210> SEQ ID NO: 5				
185	<211> LENGTH: 23				

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/809,312

DATE: 01/21/2005
TIME: 12:37:59

Input Set : A:\5199-69.ST25.txt
Output Set: N:\CRF4\01212005\J809312.raw

187 <212> TYPE: DNA	
189 <213> ORGANISM: artificial sequence	
191 <220> FEATURE:	
193 <223> OTHER INFORMATION: primer	
195 <400> SEQUENCE: 5	
197 tgcacctgtg cctcagccat gtc	23
200 <210> SEQ ID NO: 6	
202 <211> LENGTH: 57	
204 <212> TYPE: DNA	
206 <213> ORGANISM: artificial sequence	
208 <220> FEATURE:	
210 <223> OTHER INFORMATION: primer	
212 <400> SEQUENCE: 6	
214 ctcgagaacc atggactaca aggacgatga tgacaaagga tcactcctgg cgaccct	57
217 <210> SEQ ID NO: 7	
219 <211> LENGTH: 57	
221 <212> TYPE: DNA	
223 <213> ORGANISM: artificial sequence	
225 <220> FEATURE:	
227 <223> OTHER INFORMATION: primer	
229 <400> SEQUENCE: 7	
231 ctcgagaagg atggactaca aggacgatga tgacaaagga gcatccctac tcaagaa	57
234 <210> SEQ ID NO: 8	
236 <211> LENGTH: 30	
238 <212> TYPE: DNA	
240 <213> ORGANISM: artificial sequence	
242 <220> FEATURE:	
244 <223> OTHER INFORMATION: primer	
246 <400> SEQUENCE: 8	
248 gaattctcgta gcttggtttc tcagttgcac	30
251 <210> SEQ ID NO: 9	
253 <211> LENGTH: 57	
255 <212> TYPE: DNA	
257 <213> ORGANISM: artificial sequence	
259 <220> FEATURE:	
261 <223> OTHER INFORMATION: primer	
263 <400> SEQUENCE: 9	
265 ctcgagaagg atggactaca aggacgatga tgacaaagga gcatccctac tcaagaa	57
268 <210> SEQ ID NO: 10	
270 <211> LENGTH: 87	
272 <212> TYPE: DNA	
274 <213> ORGANISM: artificial sequence	
276 <220> FEATURE:	
278 <223> OTHER INFORMATION: primer	
280 <400> SEQUENCE: 10	
282 ttcttctgct tcttttcta gtagttcttc gttttctttt gctagttctt ctgcttttg	60
284 ttcgaggggtg ctggcaggac taggata	87
287 <210> SEQ ID NO: 11	
289 <211> LENGTH: 83	

RAW SEQUENCE LISTING DATE: 01/21/2005
 PATENT APPLICATION: US/10/809,312 TIME: 12:37:59

Input Set : A:\5199-69.ST25.txt
 Output Set: N:\CRF4\01212005\J809312.raw

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291 <212> TYPE: DNA
293 <213> ORGANISM: artificial sequence
295 <220> FEATURE:
297 <223> OTHER INFORMATION: primer
299 <400> SEQUENCE: 11
301 gcaagagaaa acgaaact actagaaaaa gaagcagaag aactagaaca agaaatgcag      60
303 agcttagaggg cgagtccaa ggg
306 <210> SEQ ID NO: 12
308 <211> LENGTH: 30
310 <212> TYPE: DNA
312 <213> ORGANISM: artificial sequence
314 <220> FEATURE:
316 <223> OTHER INFORMATION: primer
318 <400> SEQUENCE: 12
320 gaattctcg a gcttggttc tcagttgcac
323 <210> SEQ ID NO: 13
325 <211> LENGTH: 57
327 <212> TYPE: DNA
329 <213> ORGANISM: artificial sequence
331 <220> FEATURE:
333 <223> OTHER INFORMATION: primer
335 <400> SEQUENCE: 13
337 ctcgagaagc atggactaca aggacgatga tgacaaagga gcattccctac tcaagaa      57
340 <210> SEQ ID NO: 14
342 <211> LENGTH: 30
344 <212> TYPE: DNA
346 <213> ORGANISM: artificial sequence
348 <220> FEATURE:
350 <223> OTHER INFORMATION: primer
352 <400> SEQUENCE: 14
354 gaattctcg a gcttggttc tcagttgcac
357 <210> SEQ ID NO: 15
359 <211> LENGTH: 100
361 <212> TYPE: DNA
363 <213> ORGANISM: artificial sequence
365 <220> FEATURE:
367 <223> OTHER INFORMATION: primer
369 <400> SEQUENCE: 15
371 gaattcaacc atggactaca aggacgatga tgacaaaatg gcatttatga ctggaggaca      60
373 acaaataggg a agagacccag acctcgaaaca aagagcagaa
376 <210> SEQ ID NO: 16
378 <211> LENGTH: 30
380 <212> TYPE: DNA
382 <213> ORGANISM: artificial sequence
384 <220> FEATURE:
386 <223> OTHER INFORMATION: primer
388 <400> SEQUENCE: 16
390 gaattctcg a gcttggttc tcagttgcac
393 <210> SEQ ID NO: 17

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/809,312

DATE: 01/21/2005
TIME: 12:37:59

Input Set : A:\5199-69.ST25.txt
Output Set: N:\CRF4\01212005\J809312.raw

395 <211> LENGTH: 99
 397 <212> TYPE: PRT
 399 <213> ORGANISM: artificial sequence
 401 <220> FEATURE:
 403 <223> OTHER INFORMATION: frame (see item 11 on Error summary sheet)
 405 <400> SEQUENCE: 17
 407 Met Asp Tyr Lys Asp Asp Asp Lys Met Ala Ser Met Thr Gly Gly
 408 1 5 10 15
 411 Gln Gln Met Gly Arg Asp Pro Asp Leu Glu Gln Arg Ala Glu Glu Leu
 412 20 25 30
 415 Arg Glu Asn Glu Glu Leu Leu Glu Lys Glu Ala Glu Glu Leu Glu Gln
 416 35 40 45
 419 Glu Asn Ala Glu Leu Glu Gly Glu Cys Gln Gly Leu Glu Ala Arg Asn
 420 50 55 60
 423 Arg Glu Leu Arg Glu Arg Ala Glu Ser Val Glu Arg Glu Ile Gln Tyr
 424 65 70 75 80
 427 Val Lys Asp Leu Leu Ile Glu Val Tyr Lys Ala Arg Ser Gln Arg Thr
 428 85 90 95
 431 Arg Ser Ala
 435 <210> SEQ ID NO: 18
 437 <211> LENGTH: 92
 439 <212> TYPE: DNA
 441 <213> ORGANISM: artificial sequence
 443 <220> FEATURE:
 445 <223> OTHER INFORMATION: synthetic oligo nucleotide
 447 <400> SEQUENCE: 18
 449 tcgagtcatg gtaaaaatga cgtcatggta attatcatgg taaaaatgac gtcatggtaa 60
 451 ttatcatggt aaaaatgacg tcatggtaat ta 92
 454 <210> SEQ ID NO: 19
 456 <211> LENGTH: 92
 458 <212> TYPE: DNA
 460 <213> ORGANISM: artificial sequence
 462 <220> FEATURE:
 464 <223> OTHER INFORMATION: synthetic oligo nucleotide
 466 <400> SEQUENCE: 19
 468 agcttaatta ccatgacgtc atttttacca tgataattac catgacgtca tttttaccat 60
 470 gataattacc atgacgtcat ttttaccatg ac 92
 473 <210> SEQ ID NO: 20
 475 <211> LENGTH: 21
 477 <212> TYPE: RNA
 479 <213> ORGANISM: artificial sequence
 481 <220> FEATURE:
 483 <223> OTHER INFORMATION: siRNA (see item 11 on Error summary sheet)
 485 <400> SEQUENCE: 20
 487 aagucagcug cucucaggua c 21

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/809,312

DATE: 01/21/2005

TIME: 12:38:00

Input Set : A:\5199-69.ST25.txt

Output Set: N:\CRF4\01212005\J809312.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date